UNIQUE IDENTIFICATION (UID)

Unique Identification (UID) of Tangible Items (UII)

LeAntha Sumpter, Program Manager for Item UID

February 2005

DoD Vision for UID

DoD, its coalition partners, and industry efficiently and effectively manage people, property, and intangible assets using globally unique identification
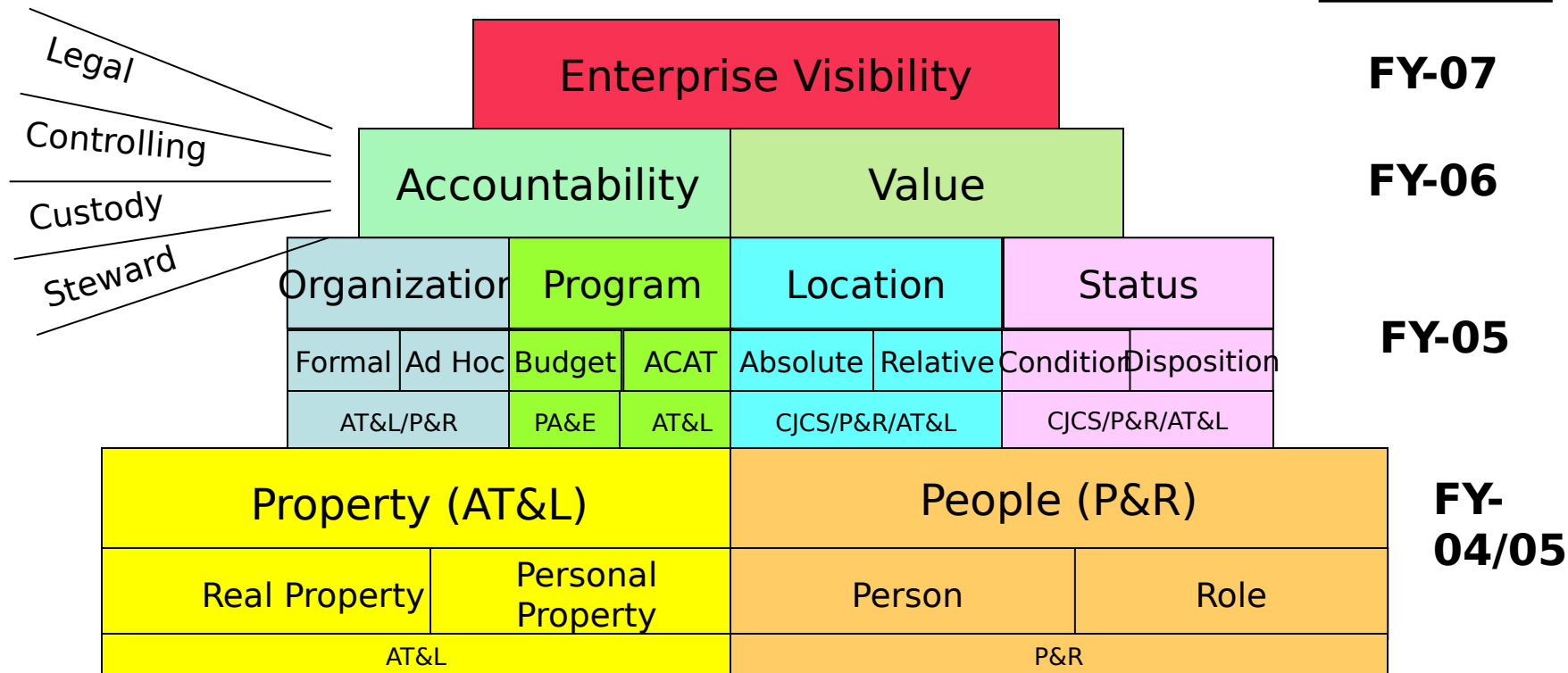
UID Goals

Ubiquitous and Globally Unique Identifiers that Capitalize on Leading Practices will enhance

- ✓ *Lower Life Cycle Management Costs*
- ✓ *Improve Operational Readiness*
- ✓ *Improve Accounting and Visibility*
- ✓ *Reduce Burden on Workforce*

Data Roadmap

Legal

Controlling

Custody

Steward

Enterprise Visibility			**FY-07**
Accountability		**Value**	**FY-06**
Organization	Program	Location	Status
Formal / Ad Hoc	Budget / ACAT	Absolute / Relative	Condition / Disposition
AT&L/P&R	PA&E / AT&L	CJCS/P&R/AT&L	CJCS/P&R/AT&L

FY-05

Property (AT&L)		**People (P&R)**
Real Property	Personal Property	Person / Role
AT&L		P&R

FY-04/05

4

UID: What makes it so special?

UID…

➢**Provides "*The Key*" to discovery and correlation of item, real property and human resource information so**

✓DoD can **consistently locate, control and value assets** anywhere and anytime

➢Is an applied *leading industrial practice* interconnecting people, item, real property (places), organizations, force structure, programs, etc.

➢Enables *globally accessible and secure* enterprise data

➢Registries enable *creation of UID mission critical services* to

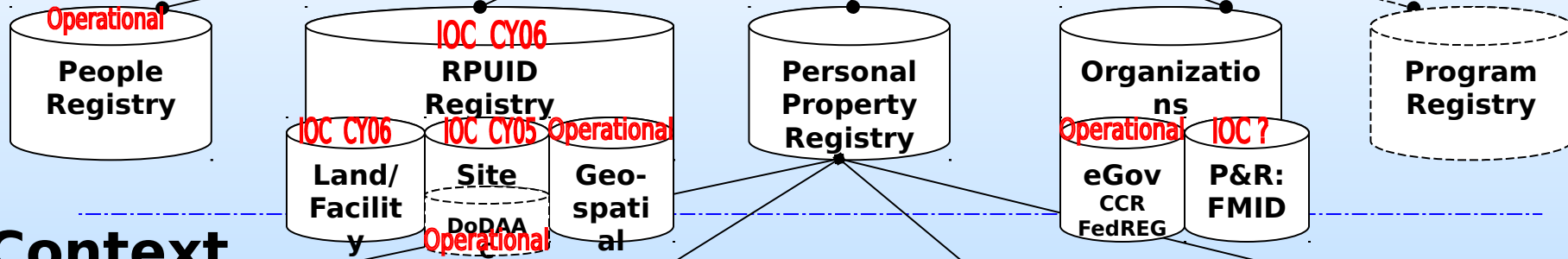✓Translate legacy data for existing DoD systems

UID Registry Concept

Rules

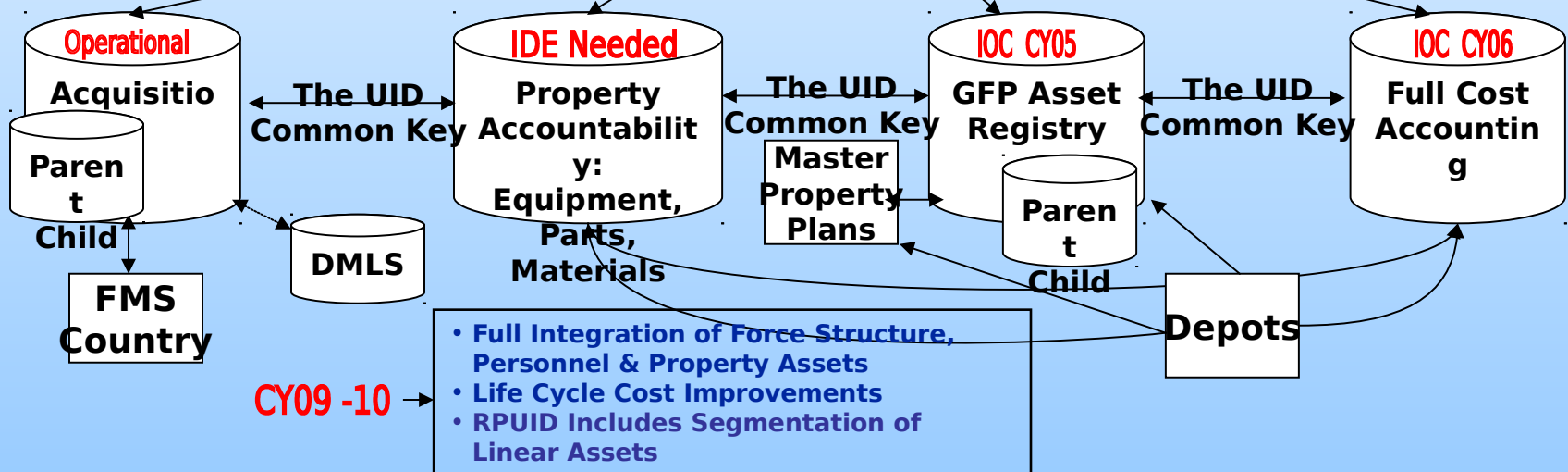NII to incorporate UID in data architecture in 2005 → **UID Registry**

UID "Google"
IOC CY05

Keys

People Registry
Operational

RPUID Registry
IOC CY06

- Land/Facility — IOC CY06
- Site — IOC CY05
- DoDAAC — *Operational*
- Geo-spatial — *Operational*

Personal Property Registry

Organizations — *Operational*
- eGov CCR FedREG
- P&R: FMID — IOC ?

Program Registry

Context

Acquisition — *Operational*
- Parent
- Child

FMS Country

DMLS

The UID Common Key ↔ Property Accountability: Equipment, Parts, Materials — IDE Needed

The UID Common Key ↔ GFP Asset Registry — IOC CY05
- Parent
- Child

Master Property Plans

The UID Common Key ↔ Full Cost Accounting — IOC CY06

Depots

- **Full Integration of Force Structure, Personnel & Property Assets**
- **Life Cycle Cost Improvements**
- **RPUID Includes Segmentation of Linear Assets**

CY09 -10 →

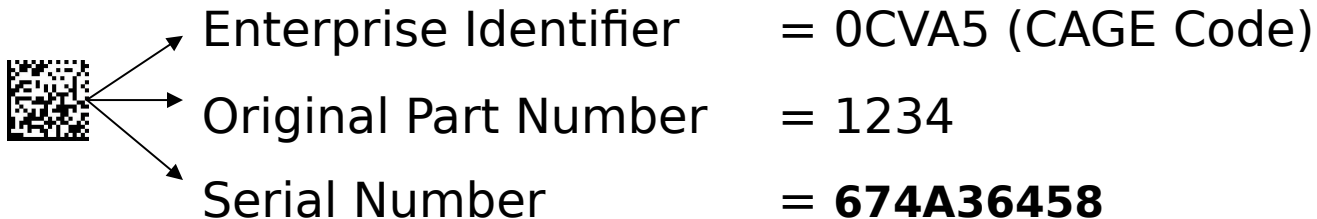# What's the UID punch line?

- Data should be system agnostic
- Data should be functionally agnostic
- Emphasize XML and EDI; migrate from MILS
- People, Item and Real Property data schemas are identified
- Program, Organization and Location UIDs are TBD

- Systems must conform to key data and transaction hub requirements
- Data transfers should use existing translation capabilities to the maximum extent possible
- DoD is developing a vision for enabling UID data repositories

UID: How is it Constructed for UII?

The UID shall be derived from its discrete component data elements – the UID is not required to be marked on the item as a separate data element.

From the Data Matrix:

Enterprise Identifier	= 0CVA5 (CAGE Code)
Original Part Number	= 1234
Serial Number	= **674A36458**

The UID can be derived using the IAC for CAGE, which is "D":

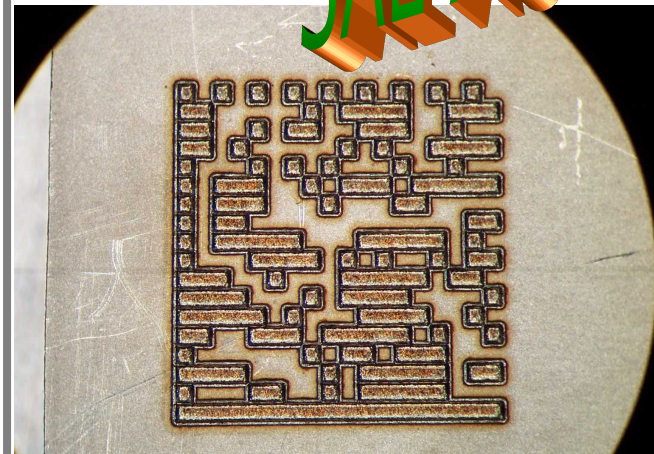| UID Construct 1	UID Construct 2
If the Serial Number is Unique within the Enterprise Identifier	*If the Serial Number is Not Unique within the Enterprise Identifier but is Unique within the Part Number*
D0CVA5674A36458	**D0CVA51234674A36458**

Dot Peen

Electro Chemi Etch

Ink Jet/ Printing

Laser

SAEAS 9132

ISO 15416

Source: Rolls-Royce, Nat Russhard

UID-RFID Database Data Relationship

End Item Database Data (15)

- ◆ UID (Concatenated)
- ◆ Descriptive Data
  - – UID Data Elements (3)
  - – Issuing Agency Code
  - – UID Type
  - – Item Description
  - – Unit of measure
- ◆ Acquisition Data
  - – Contractor
  - – Contract Number
  - – CLIN/SLIN/ELIN
  - – Price
  - – Acceptance Code (identifies acceptor)
  - – Acceptance Date
  - – Ship to code

Embedded Items of End Items (10)

- ◆ UID (Concatenated)
- ◆ Descriptive Data
  - – UID Data Elements (5)
  - – Item Description
  - – Unit of measure
- ◆ Parent UID as of delivery date
- ◆ GFP flag

RFID Data at the Pallet Level
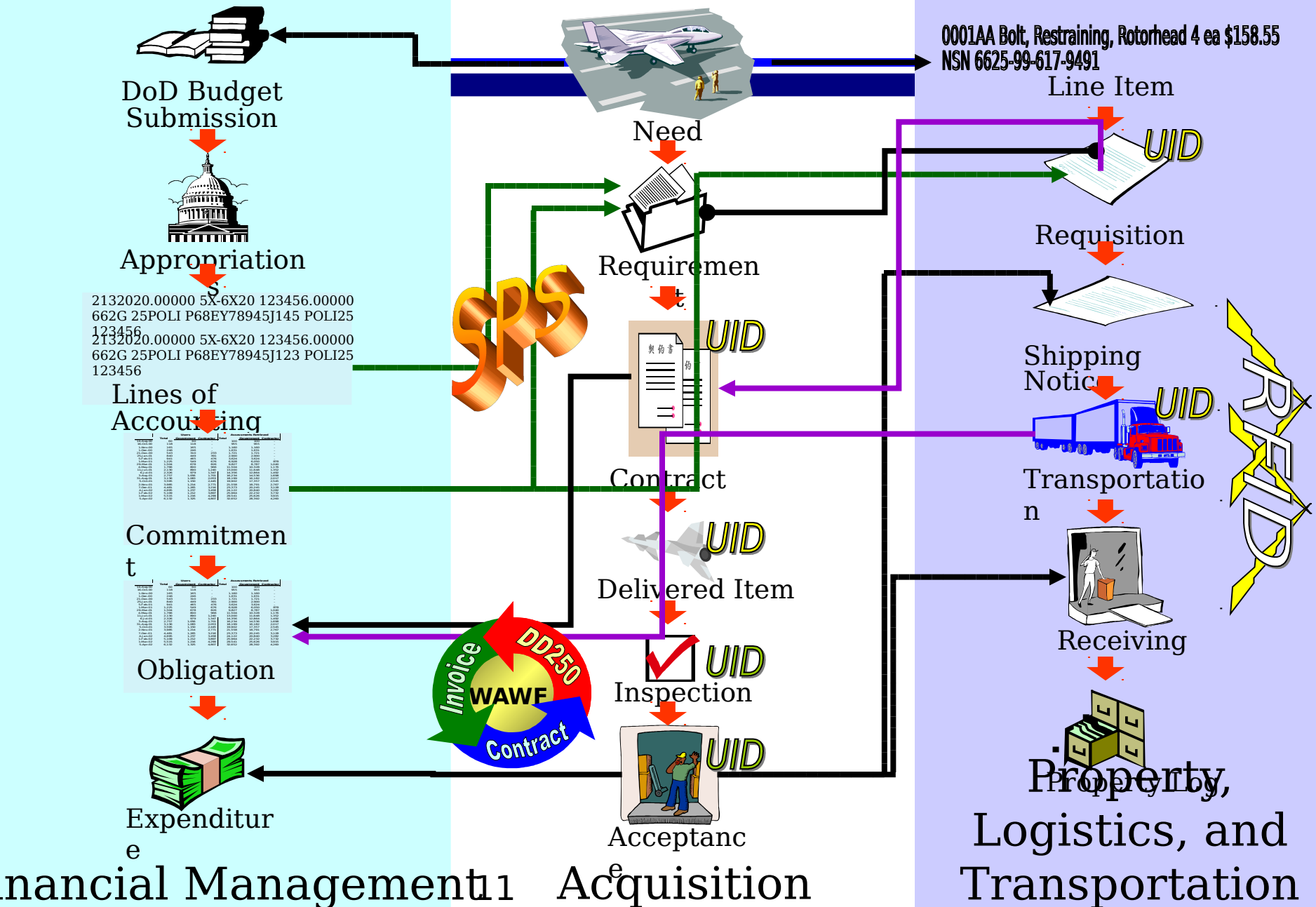
- ◆ Pallet EPC
- ◆ Shipping Data

RFID Data at the Case Level

- ◆ Pallet EPC
- ◆ Case EPC

RFID Data at the Item Package Level

- ◆ Case EPC
- ◆ Item Package EPC or UID

Enterprise UID Digital Data Flow Potential

DoD Budget Submission

Appropriations

2132020.00000 5X-6X20 123456.00000 662G 25POLI P68EY78945J145 POLI25 123456
2132020.00000 5X-6X20 123456.00000 662G 25POLI P68EY78945J123 POLI25 123456

Lines of Accounting

Commitment

Obligation

Expenditure

Need

Requirement

SPS

UID

Contract

UID

Delivered Item

UID

Inspection

WAWF — Invoice — DD250 — Contract

UID

Acceptance

0001AA Bolt, Restraining, Rotorhead 4 ea $158.55
NSN 6625-99-617-9491

Line Item

UID

Requisition

Shipping Notice

UID

Transportation

RFID

Receiving

Property, Logistics, and Transportation

Financial Management   11   Acquisition

What We Have Learned
(DoD Property Environment)

◆ Need for common approach to entity identification across DoD

◆ Cannot get clean audit or asset visibility without standardizing data and processes

◆ DoD has unreliable property data and poor internal controls
  – Countless property management systems - ranging from paper to automated systems, spanning accountability, maintenance, disposal, inventory, and distribution
  – Currently personal property handoffs occur inconsistently (probably at least 75 different processes)

◆ Target three future receipt and acceptance approaches – Will take five years to re-engineer all; deployment undetermined
  – Step one – DoD and Business Partners (Include GFP Registry)
  – Step two – Internal DoD
  – Step three – External Federal and Foreign

◆ Re-engineering effort will be directed by AT&L

Reengineering Property Transfers

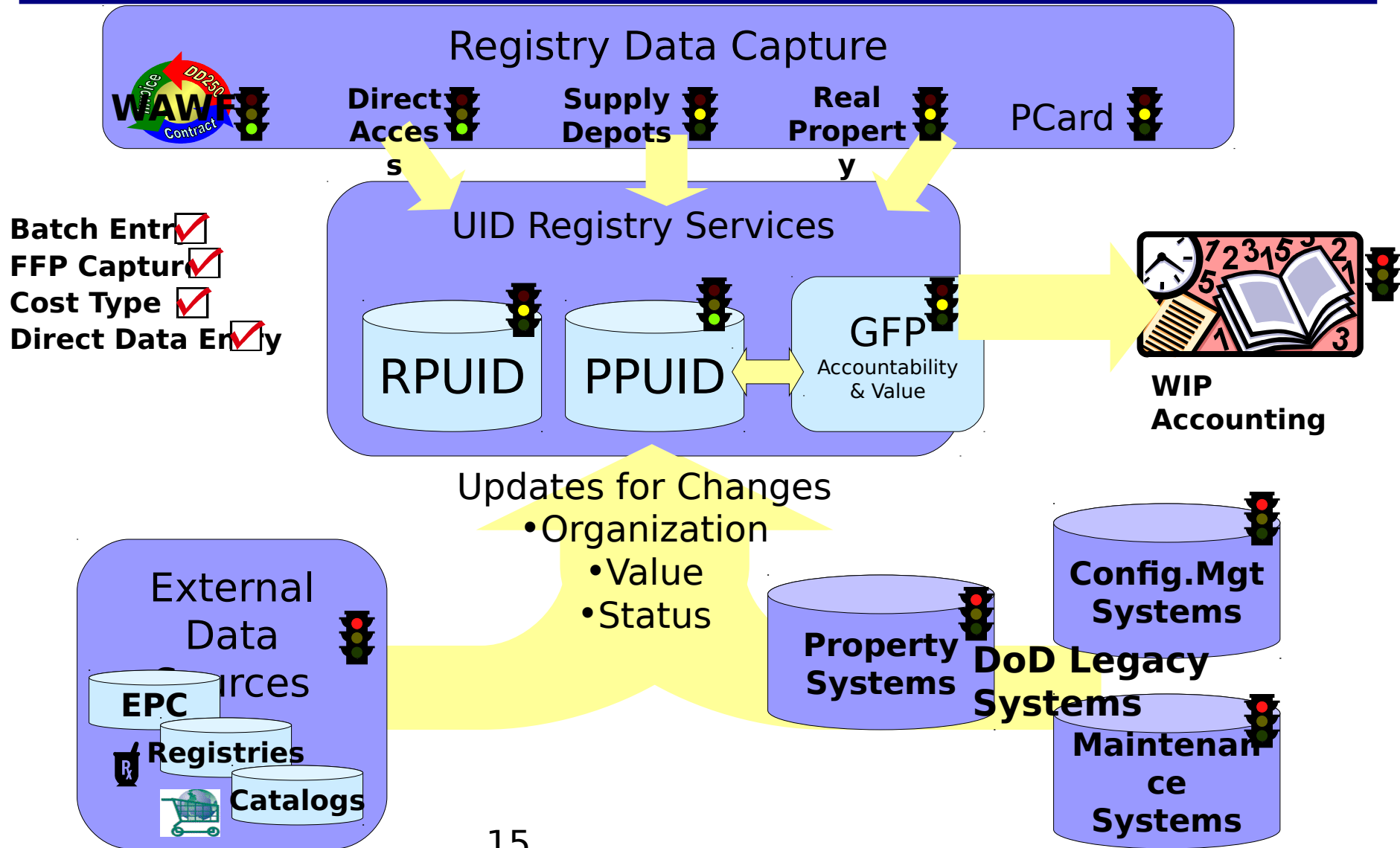|	Acceptance Point	Phase I Present-May 05	Phase II Oct 04-Jan 06	Phase III Oct 05-Sep 07	Phase IV Oct 06-Sep 08
External – Internal acceptance	Source and Destination	Dependent on completion of WAWF deployment			
External – Internal receipt and acceptance	Destination	Dependent on DSS-WAWF Integration			
Internal – External receipt and acceptance	Destination		GFP capture at WAWF or contractor		
Internal – Internal receipt	Destination			Integration w/Property Records	
Internal – Internal acceptance	Source and Destination				Captures & reconciles accountability transfer
External – Internal acceptance (Real Property)	On site				Integrating acquisition & real property records

Principles for Future Property Environment

- ◆ Create data one time, reuse often
- ◆ Property should only be in one accountability system at a time
- ◆ Need to separate accounting from accountability
- ◆ Acquisition value will only be recorded and updated in the UID registry
- ◆ UID Registry will -
  - – Never be an accountability system; but will be the audit trail of current and previous accountability systems
  - – Maintain basic/master UID data
  - – Not maintain contextual data (transactional data); the registry will point to accountability system(s)
  - – Will be updated with key transaction events
- ◆ The concatenated UII is the common data key across systems
- ◆ DCMA will have access to contractor stewardship records that augment the UID Registry
- ◆ If item is not serialized at the point of shipment, it must be serialized at receipt

Property UID Systems Environment "To Be"

Registry Data Capture

WAWF | Direct Access | Supply Depots | Real Property | PCard

UID Registry Services

Batch Entry ☑
FFP Capture ☑
Cost Type ☑
Direct Data Entry ☑

RPUID | PPUID | GFP Accountability & Value

WIP Accounting

Updates for Changes
- Organization
- Value
- Status

External Data Sources

EPC
Registries
Catalogs

Property Systems

DoD Legacy Systems

Config. Mgt Systems

Maintenance Systems

Item Lifecycle – Data Storage/Access Concept of Ops
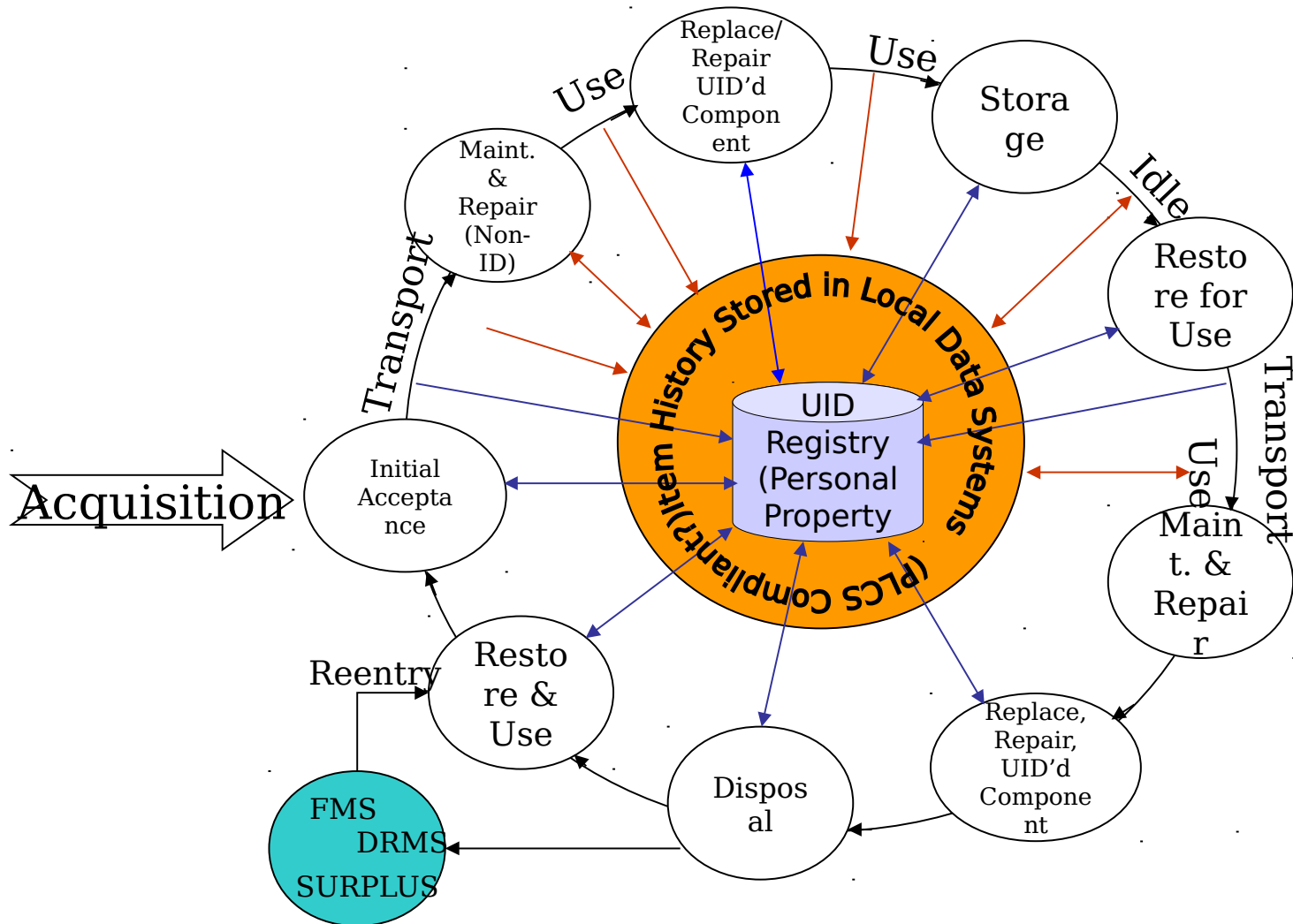
UID Registry/1662 timeline (2005-2006)

2005   2006   2007

Jul 1	Nov 15	Jan 1	Mar 31	Jul 31	Mar 31
Registry: long term Capable for bulk load	Registry: all GFP capable by each(s)	GFP Clause in all new contracts	First deadline for 1662 reconciliation	FOC GFP	Final Deadline: All contractors must be on-line

- Contractors must complete 1662 no later than Mar 31, 2006
- Data on all GFP must be contained in registry prior to reconciliation

- Small businesses may submit paper 1662
- Delinquent large companies owe 1662

Portal for Property Transfers

No UID, Possession → WAWF Archives

Item Record Creation

856

Invoice / DD250 / Contract — **Wide Area Workflow**

UID, Possession → UID Registry

Who has property accountability?

Property Book Systems

Yes UID

Possession

No

GFP Registry

DFAS

PCARSS

No UID

DRMS ← DAISY (DLA)

Flat file batch updates

WIP

Strategic Next Steps for Item UID

- **February 05**
  - ➢ Refine UID CONOPS with Depots
  - ➢ UID Directive Staffing
  - ➢ Draft Budget Instructions
- **March 05**
  - ➢ Finalize initial paperless GFP capability
  - ➢ ACAT 1D Aviation UID PM Workshop
  - ➢ Define Org and Location UID Family of Capabilities
- **June 05 - ACAT 1D UID PM plans due**
- **July – Nov 05 - Non-ACAT UID PM Workshops**
- **Sept 05 - Paperless GFP IOC**
- **January 06 – Non-ACAT UID Plans due**
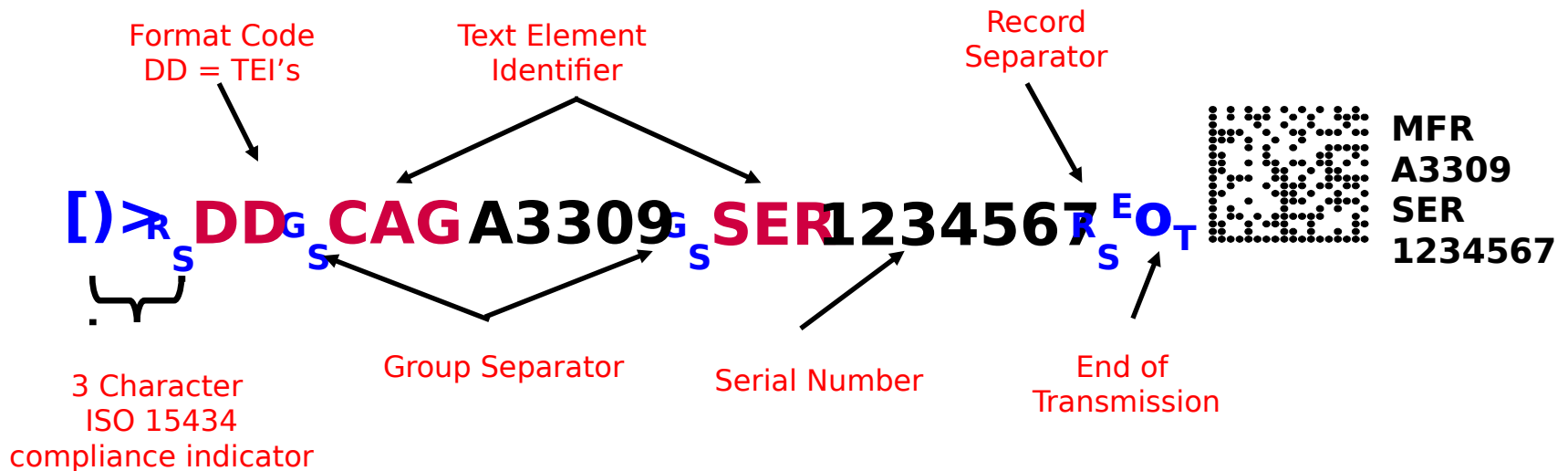
Background Slides

UID Data Element Summary

	Descriptive data		Custody
🟩	UID	🟩	CAGE
	Issuing Agency Code		Contract Number
	Enterprise Identifier		DoDAAC
	Original Part Number		DUNS
	Serial Number		Received Date
	UID Type		Sent Date
🟥	Description		Status Flag
🟩	Batch/Lot		**Mark**
	Current Part Number	🟩	Contents
	Current Part Number Effective Date		Effective Date
	Manufacturer Identifier		AddedOrRemoved
	Parent UID		Marker Code
	ContractInfo		Marker Identifier
🟩	Contract Number		Medium
	Prime Contractor Identifier		Value
🟥	Acceptance Code		**Open Items**
🟩	Acceptance Date	🟥	Custodian or Steward (System)
	Acquisition Cost		Location UID
	CLIN/SLIN/ELIN		Program UID
	Foreign Currency Code		Item Status
🟥	Ship-to Code		Current Value
🟩	Unit of Measure		Alias (system unique)
			Property Type

Example UID Encoded Data Matrix

Format Code
DD = TEI's

Text Element
Identifier

Record
Separator

[)> ᴿˢ **DD** ᴳˢ **CAG** **A3309** ᴳˢ **SER** **1234567** ᴿˢ ᴱ**O**ᵀ

MFR
A3309
SER
1234567

3 Character
ISO 15434
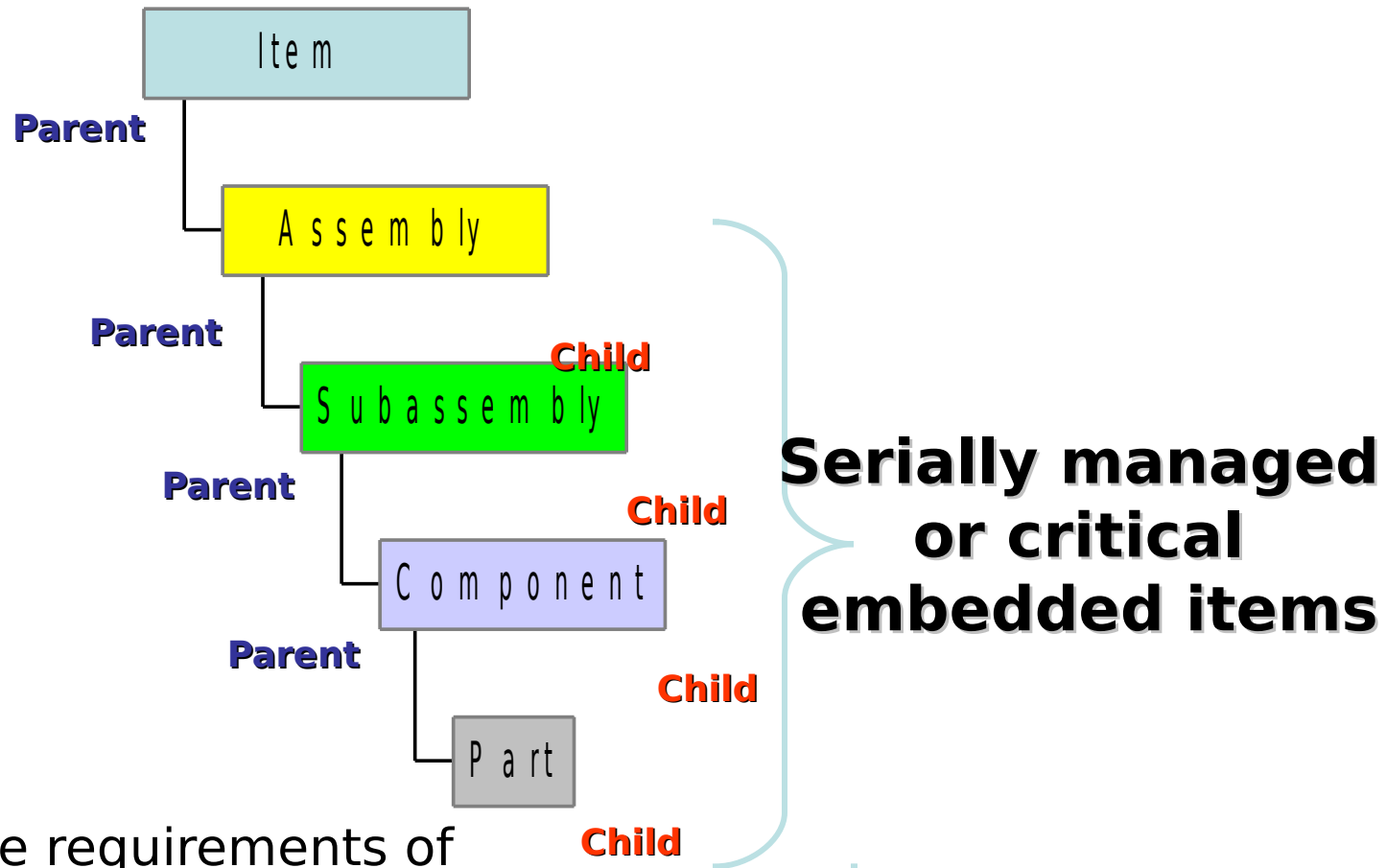compliance indicator

Group Separator

Serial Number

End of
Transmission

Note: This example uses construct #1 with Text Element Identifiers (TEI).

UID#/UII = DA33091234567

Parent Child Hierarchy

Item

Parent

Assembly

Parent

Child

Subassembly

Parent

Child

Component

Parent

Child

Part

Child

Serially managed or critical embedded items

Derived from the requirements of DFARS 211.274